



Patients with St-Elevation Acute Coronary Syndrome in Young Aged Persons

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ABSTRACT Cardiovascular accidents (unstable angina (UA), acute coronary syndrome (ACS), acute myocardial infarction (AMI)) are especially dangerous because of their sudden onset, which is often accompanied by the development of life-threatening complications. The effectiveness of systemic administration of thrombolytic drugs (TDP) in patients with ST- segment elevation ACS was studied. in patients at a young age and the effect of these drugs on the dynamics of myoglobin (MG) was studied in order to further predict the course of this disease. The study included 126 patients aged 18 to 45 years. The mean age of the patients was 38.5 ± 5 years. Among these patients, thrombolytic therapy (TLT) was performed in 72 patients with ST- segment elevation ACS admitted to the ACS department of the Samarkand Regional Branch of the Republican Scientific and Practical Medical Center of Cardiology (SRF RNPMCK) in the first 6 hours of the disease.

Keywords thrombolytic therapy, acute coronary syndrome, young age, streptokinase , myoglobin.

Relevance:

Cardiovascular diseases occupy the first place in the general structure of pathology and are the cause of premature death among the population in more than 60% of cases. Cardiovascular accidents (unstable angina (UA), acute coronary syndrome (ACS), acute myocardial infarction (AMI)) are especially dangerous because of their sudden onset, which is often accompanied by the development of life-threatening complications [1, 3, 13, 22] . ACS is a provisional diagnosis that includes any group of clinical signs or symptoms suggestive of AMI or unstable angina. Therefore, it is worth starting highly qualified treatment as soon as possible, since the greatest losses occur precisely in the first 2 hours of the disease [1, 3, 10, 18].

ACS is a state of developing thrombosis that occurs when an atherosclerotic plaque ruptures in a coronary artery, which can later transform into AMI or unstable angina pectoris. The clinical picture largely depends on the characteristics of the nature of the violation of the patency of the coronary artery [2, 3, 5, 21]. With spasm of the coronary artery or the formation of a platelet aggregate, unstable angina develops. With the formation of a parietal red thrombus, AMI without a Q wave develops, with the formation of an obstructive, strong red or mixed thrombus, occlusion of the coronary artery occurs and transmural AMI with a Q wave develops [4, 7, 14].

It was noted that patients under 45 years of age admitted to the hospital with ACS, were not previously observed by doctors [8, 19, 24]. According to a number of studies, in patients with ACS at a young and middle age, high levels of pre-hospital (up to 36-50%), hospital mortality (15-16%) remain, and its share on the first day of hospital treatment is about 40.4% [1, 4, 7, 16]. Up to 50% of deaths in patients with ACS occur in the first 1.5–2 hours from the onset of an anginal attack, a significant proportion of patients die before the arrival of the ambulance [12, 14, 17].

The main achievements of medicine in the second half of the 20th century, which made it possible to reduce hospital mortality in patients with ACS from an average of 25-30% to 8.4%, were the creation of specialized intensive care units equipped with monitoring and resuscitation equipment, which have been widely introduced since the early 90s thrombolytic therapy (TLT) and the development of endovascular methods of treatment [7, 12, 25].

Thrombolytic drugs, which today are the main ones in the treatment of ACS, have made it possible to reduce mortality from this disease to 7% and even to 5% in the leading clinics of the world. Therefore, one of the most important stages in the treatment of acute occlusive coronary thrombosis is the rapid and complete restoration of coronary blood flow and the provision of adequate myocardial perfusion. To dissolve a thrombus occluding an artery, thrombolytic drugs are used; to maintain the patency of a coronary artery, various classes of antithrombotic agents are used: drugs that affect platelet function and inhibit the key clotting enzyme thrombin [6, 8, 14, 18].

To date, the most vulnerable group of patients who die before being admitted to hospitals are people under 50 [6, 7, 19, 22], since this part of the population is the labor and intellectual potential of society [10, 20]. The main reasons for these phenomena are considered to be the low effectiveness of primary and secondary prevention of coronary artery disease, as well as problems in diagnosis and treatment [11, 14].

Purpose of the study: to study the effectiveness of systemic administration of TLP in patients with ACS with ST segment elevation at a young age and to study the effect of these drugs on the dynamics of myoglobin (MG) in order to further predict the course of this disease.

Materials and methods of the study: 126 patients aged 18 to 45 years were included in the study. The mean age of the patients was 34.5 ± 5 years. Among these patients, TLT was performed in 72 patients with ACS who were admitted to the ACS department of the Samarkand Regional Branch of the Republican Scientific and Practical Medical Center for Cardiology (SRF RNPМCK) in the first 6 hours of the disease.

The diagnosis of ACS was verified on the basis of clinical and instrumental data: 1) the presence of characteristic complaints; 2) clinical picture; 3) ECG changes in ST segment elevation more than 1 mm in at least 2 leads.

Depending on the treatment, all patients were divided into 2 groups: main and control. The main group included 72 patients with ACS who received TLT. AMI was noted in the anamnesis in 5 (6.90%) patients, AH in 11 (15.2%) patients, arrhythmias in 13 (8.1%) patients. Predominantly anterior localization was observed in 12 (16.6%) patients, posterior in 16 (22.2%) people, in 22 (30.6%) the lesion of the heart muscle was transmural.

The control group included 54 patients in whom thrombolytic drugs (TLP) were not included in the therapeutic measures. The average time of admission from the onset of clinical manifestations of ACS was 3.15 ± 2.09 hours. The average age of patients in the control group was 38.5 ± 5 years. In anamnesis, 10 (18.5%) patients had indications of AH, 20 (37%) people had MI, 8 (14.8%) had rhythm

disturbances. Anterior localization of the focus of necrosis was detected in 13 (24.1%) patients, posterior in 31 (57.4%). In 10 (18.5%) myocardial damage, according to ECG data, was of a transmural nature.

In general, patients of the main and control groups are similar in clinical and anamnestic characteristics, localization of ST segment elevation and time of admission to the hospital, which later allowed us to make certain conclusions about the effectiveness of TLP in patients with ACS. Blood for the study was taken before the introduction of streptokinase, and then every 3 hours on the 1st day, on the 2nd day every 12 hours, once on the 3rd, 5th, 7th and 10th days. After the end of TLT, heparin was prescribed under the control of hemostasis parameters. Patients in the control group received heparin at a daily dose of 20 thousand units. per day. In the case of successful thrombolysis, there was a decrease in the frequency of recurrence of anginal pain by 1.4 times, the number and severity of rhythm disturbances by 1.7 times, as well as a decrease in the manifestations of decompensation by 7 days by 1.8 times in the main group compared with the control group.

Based on the criteria described above, the patients of the main group were divided into subgroups 1a and 1b with successful and unsuccessful TLT, differing both in clinical signs and according to instrumental methods of examination. Pain syndrome relapses were noted in 5 (6.9%) and 4 (7.4%) patients, arrhythmias of various classes were recorded on the 1st day in 8 (11.1%) and 2 (3.7%) patients, from 2 to x day, circulatory failure was observed in 11 (15.2%) and 5 (9.3%) patients. By day 7, local contractility disorders were observed in 8 (11.1%) and 5 (9.3%) patients, respectively. There were no deaths in the subgroup.

The kinetics of necrosis markers in patients of the main and control groups showed that the maximum MG activity in the main group was reached by 6 hours, while in patients in the control group, the maximum increase in MG levels was 9 hours from the start of therapy. Moreover, for 5 days, the levels of MG in both groups significantly differed from the control group, and this difference persisted on the 10th day. Accelerated achievement of the peak concentration of MG in the blood of 1a and 1b subgroups of the main group was noted in patients with successful TLT.

Thus, the maximum level of MG in subgroup 1a was reached by 6 hours was 1481.3 ± 197.0 ng / ml, and in 1b 1638.9 ± 180.1 ng / ml by 9 hours, on the 10th day, the level of MG normalized in patients with successful TLT, while in patients with unsuccessful TLT, the level of MG remained elevated. However, in patients of the 1b subgroup and the control group, "recurrent" and "prolonged" MG release curves were more common, which may be due to the phenomenon of their "washout" from the focus of myocardial necrosis during coronary reperfusion. The obtained results confirm that the onset of reperfusion in patients in the first hours of MI can be based on the analysis of the dynamics of the concentration of MG in the blood serum.

Conclusions: thus, in patients who received TLT, there was a decrease in the frequency of recurrence of anginal pain by 1.4 times, the number and severity of rhythm disturbances by 1.7 times, as well as a decrease in the manifestations of decompensation by 7 days by 1.8 times in the main group compared with the control. MG in subgroup 1a was reached by 6 hours was 1481.3 ± 197.0 ng / ml, and in 1b 1638.9 ± 180.1 ng / ml by 9 hours, on the 10th day the MG level returned to normal in patients with successful TLT, while in patients with unsuccessful TLT, the level of MG remained elevated.

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